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ABSTRACT

2 A compiler includes a real register allocation stage, an optimization stage and a final code
3 stage. The real register allocation stage is configured to generate intermediate code from a basic
4 block of source code. Physical registers, instead of virtual registers, are allocated to operands
5 from the generated intermediate code, and the operands are stored in the physical registers.
6 Then, the intermediate code is optimized, and machine readable code is generated from the
7 intermediated code using the optimized registers in the final code stage. By allocating physical
8 registers in the front-end of the compiler, instead of just prior to generating the machine-readable
9 code, compiling time and memory needed for compiling source code is reduced.

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